

Teaching skills for Future Legal Professionals

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Introduction

The UTS Faculty of Law has recently launched a Legal Futures and Technology major to commence in 2018, the first of its kind in Australia. The major will consist of 30 credit points, comprising of a mix of existing law electives, bespoke law electives such as Disruptive Technologies and two capstone subjects – Technology, Law, Policy and Ethics (Capstone 1) and Applied Project in Law, Innovation and Technology (Capstone 2). The development of the major was informed by concerns articulated in a series of public lectures entitled ‘Legal Futures’ by members of the legal profession and an external advisory group about the kinds of skills legal practitioners may need in the future, including understanding of technologies, legal resources and project management.¹ These concerns about future needs of practitioners have been well articulated in the NSW Law Society’s *The Future of Law and Innovation in the Profession* report (*flip*).²

An ongoing question, famously encapsulated by Frank Easterbrook in the 1990s, is whether or not teaching and researching law through the prism of technology is as pointless as teaching law through the category of the horse?³ There is international recognition that technology has the potential to change how we study, teach, research and practice the law. But can socio-technological change be slotted into existing legal education or can and should we be creating new pedagogical responses to the challenges posed by technological developments? The answer I propose in this article is both. I highlight the way in which the UTS Law Faculty embeds the interface of law and socio-technological change within the existing curriculum. I then go on to consider the ways in which the UTS Law Faculty has created new pedagogical responses by offering students the opportunity to engage with and gain expertise in working with new technologies. Finally, I consider the new capstone subjects which engage specifically with the interface of law and socio-technological developments through the prism of classic legal values of justice and ethics.

A recurring metaphor persuasively summarised by Bennett Moses, is that law is a race with technology, and is unable to keep up.⁴ This article argues that the values of technology are capacity, innovation and efficiency – about increasing what we *can* do. In contrast, law is not about what we can do, but whether we *should*. Rather than attempting to engage in a race with technology that law is doomed to lose, law can and should direct how we use the increased capacity of technology. To prepare students for the interface of law and socio-technological change, legal pedagogy needs to provide a strong normative foundation (of at least) the values of ethics and justice.

¹ The UTS Legal Technology Major Reference Group consists of legal practitioners who practice in a variety of organisations.

² Law Society of New South Wales, 'The Future of Law and Innovation in the Profession' (2017).

³ Frank Easterbrook, 'Cyberspace and the Law of the Horse' (1996) *University of Chicago Legal Forum* 207.

⁴ Lyria Bennett Moses, 'Recurring Dilemmas: The Law's Race to Keep Up with Technological Change' (2007) 7 *University of Illinois Journal of Law* 239.

Section one highlights that technology is concerned with overcoming human constraints and lacks any normative, legal or self-constraint. Section two explores ways of teaching the plural and heterogeneous concept of justice in legal education to ensure that students and legal practitioners can tell a confident law story to place regulate, harness, guide and prohibit technological developments. Section three provides examples of how the UTS Law Faculty is providing students with the skills to engage with the interface of law and socio-technological development throughout the curriculum and in the new major.

1. The values of technology and law

There are many variables in the definitions of technology, I have selected the definition proposed by Schon: 'any tool or technique, any product or process, any physical equipment or method of doing or making, by which human capability is extended.'⁵ Schon's definition of technology emphasises the overcoming of physical constraints. Technology enables and enhances the exercise of human power. This definition also highlights that what is missing from technology is any normative, legal and self-constraint.⁶

This absence of normative limitations is also present in how technological developments are considered and represented. In *Narratives of Technology*, JM van der Laan provides an overview of the stories and myths that we have told and continued to tell about technology. Van der Laan identifies three main stories of technology. The first is idealistic and champions technology. It is based on an ideal of technological development providing extraordinary power and a life without limits.⁷ These optimists express the belief that 'the machine is going to take over' and this is a good thing.⁸ Theorists such as Braidotti⁹ and Haraway¹⁰ assume that technology is normatively neutral and can be used for the benefit of humankind. For example, Braidotti asserts that the 'becoming machine', merging the human with the technological, will combat or eliminate racism and sexism.¹¹ This devotion to and trust of technology is reflected in law and legal education, including our dependence upon hard and software, techniques, measures, and on-line learning platforms.¹² The

⁵ Donald Schon, *Technology and Change* (Delacourt Press, 1967) 1.

⁶ Lyria Bennett Moses, 'Why have a theory of law and technological change' (2007) 8(2) *Minnesota Journal of Law, Science and Technology* 589.

⁷ JM van der Laan, *Narratives of Technology* (Palgrave MacMillan, 2016) 50.

⁸ Ibid 52. Quoting Clarke at 229.

⁹ Rosi Braidotti, *The Posthuman* (Polity Press, 2013).

¹⁰ Donna Haraway, 'A cyborg manifesto: Science, technology and socialist feminism in the late twentieth century' in Donna Haraway (ed), *Simians, cyborgs and women: The reinventions of nature* (Routledge, 1991) 149-181.

¹¹ Braidotti, above n 9.

¹² There are too many examples to mention, but recent articles analysing the use of technology in legal education include: Eola Barnett and Linda McKeown, 'The student behind the avatar: using Second Life (virtual world) for legal advocacy skills development and assessment for external students – a critical evaluation' (2012) 8(2) *Journal of Commonwealth Law and Legal Education* 41; Desmond A. Butler, 'Technology: New Horizons in Law Teaching' in Sally Kift, Michelle Sampson, Jill Cowley and Penelope Watson (ed), *Excellence and Innovation in Legal Education* (LexisNexis, 2011) 460-459; Julian Hermida, 'Teaching Criminal Law in a Visually and Technology Oriented Culture: A Visual Pedagogy Approach' (2006) 16((1&2)) *Legal Education Review* 153; Dan Jackson, 'Human-centered legal tech: integrating design in legal education' (2016) 50(1) *The Law Teacher* 82; Elizabeth Seul-gi and Anneka Ferguson Lee, 'The development of the virtual educational space: how transactional online teaching can prepare today's law graduates for today's virtual age' (2015) 6(1) *European Journal of Law and Technology*; Paul Maharg, 'Editorial: Learning/Technology' (2016) 50(1) *The Law Teacher* 15; Paul Maharg and Emma Nicol, 'Simulation and technology in legal education: a systematic review

second narrative that van der Laan identifies is a counter-narrative that is pessimistic and dystopian, disrupting stories of technological progress, success and improvement. The common thread in this narrative is the fear that technology dominates or will dominate, all aspects of culture and society. Theorists such as David Nye note that despite the longevity of technology and its recent exponential developments it has offered little to no amelioration – it has not stopped war, established equality, enhanced human freedom, dignity or well-being.¹³ A third narrative, is that of ambivalence, it ‘typically admits to problems caused by or inherent to technology, but calls for better technology which remedies or no longer causes such problems.’¹⁴

A common theme, whether an approach is idealistic or pessimistic is that technology is at best normatively neutral, or at worst, clashes with human values. Theorists have expressed fears that technology will become the measure of all things – and the only measure of value.¹⁵ On this account, humanity is devalued, human ability is inferior and insufficient. The central values of technology are utility, optimization and efficiency. The fear is that rather than humans using technology, technology will increasingly use us. There is nothing inherently just or beneficial to society in the growth and advancement of technology.¹⁶

Lyria Bennett Moses has persuasively analysed the metaphorical tendency to depict law as in a race with technology, with law the loser.¹⁷ This is part of a broader perception that technology is speeding ahead and *nothing* including law is keeping up with new technologies.¹⁸ To a certain extent this is correct. Law cannot get ahead of technological developments – it is impossible to

and future research programme' in Caroline Strevens, Richard Grimes & Edward Phillips (ed), *Legal Education: Simulation in Theory and Practice* (Ashgate, 2014) 17-42; Mitchell Travis, 'Teaching Professional Ethics through Popular Culture' (2016) 50(2) *The Law Teacher* 147.

¹³ David Nye, *Technology matters: Questions to live with* (MIT Press, 2006). See also, Langdon Winner, *Autonomous Technology: Technics-out-of-Control as a theme in political thought* (MIT Press, 1977); Margaret Thornton, 'The Flexible Cyborg: Work-Life Balance in Legal Practice' (2016) 38(1) *Sydney Law Review* 1.

¹⁴ van der Laan, above n 7. An example of relying upon technology to clean up problems caused by technology is my current research on land contamination. We are researching the use of technologies to clean up land contamination that was originally caused by technology. The *Terminator* series also presents the need for robots to stop the robots.

¹⁵ *Ibid.* 86.

¹⁶ The recent call by scientists for an international treaty against the development of autonomous warfare is an example of fears that the ambitions of technology are not necessarily positive for the human race. Mateusz Piatkowski, 'Fully Autonomous Weapons Systems and the Principles of International Humanitarian Law' (Paper presented at the 5th International Conference of PhD students and young researchers: How deep is your law?, Lithuania, April 2017) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3006230>.

¹⁷ Bennett Moses, 'Recurring Dilemmas: The Law's Race to Keep Up with Technological Change', above n 4. Moses cites a series of examples including *See, e.g., Mount Isa Mines Ltd. v. Pusey*, 125 C.L.R. 383, 395 (Austl. 1970) (per Windeyer J.) ("Law, marching with medicine but in the rear and limping a little"); Michael Kirby, *Medical Technology and New Frontiers of Family Law*, 1 AUST. J. FAM. L. 196, 212 (1987) ("The hare of science and technology lurches ahead. The tortoise of the law ambles slowly behind."); Rev. John H. Pearson CSC, *Regulation in the Face of Technological Advance: Who Makes These Calls Anyway?*, 13 N.D. J. OF L., ETHICS & PUB. POL'Y 1, 1 (1999) ("It has become commonplace to note that these dizzying changes in science and technology can easily outstrip those systems by which we humans make critical decisions about what can and should be done by those who are responsible members of society and about how to protect those responsible members of society from those who are not so responsible."); Grant Gilmore, *The Ages of American Law* 65 ("Rapid technological change unsettles the law quite as much as it unsettles people.").

¹⁸ Lyria Bennett Moses, 'Agents of Change: How the Law "Copes" with Technological Change' (2011) 20(4) *Griffith Law Review* 763. Citing Popper 2003.

predict which socio-technological changes will occur *and* result in widespread change.¹⁹ However, the idea of a race lets technology sets the terms of engagement. Bennett Moses has argued that rather than make a doomed attempt to predict future technology, law and policy makers and interpreters should focus on the values and purposes of specific laws. Thus 'we need to think more broadly about how to regulate to protect values and minimise harm in light of an evolving socio-technical landscape rather than simply asking how technology ought to be regulated'.²⁰ This ideal can be extended from focusing on the purposes of specific laws to a more general question about the purpose of law. In her keynote speech at the Future of Australian Legal Education Conference, Martha Nussbaum concluded by asserting that 'law is a noble profession'.²¹ What makes it noble are values such as ethics and justice. These values are a vital antidote to the values of technology of efficiency, innovation and capacity. It is essential that we imbue students with strong values that can be used to harness, restrict, prohibit and/or guide technology to achieve the ends of justice and ethics.

2. The value of justice in legal education

Just as socio-technological change compels us to question the purpose of law, whether at a macro or micro level, these changes should also encourage us to return to basic principles about the purpose of legal education. The question of the purpose of legal education is of course a vexed question.²² In particular, the question of the purpose of legal education has been framed as a debate between those who regard the primary purpose as professional and vocational, and those who aspire to the ostensibly contrary view of a more humanistic legal education and express concern that legal education is overly 'subservient ... to legal practice.'²³ This can be summarised as a theory/practice debate. However, despite the longevity of this debate the divide is not so stark. Even if legal education is about preparing students to become legal practitioners,²⁴ socio-technological change encourages us to ask what kind of lawyers we want? And for students, what kind of legal practitioners do they want to be? It has long been recognised that we do not solely want legal practitioners who know the law (and how to find it) and basic legal skills. We want and need lawyers who are capable of critical thinking informed by ethical foundation and the pursuit of justice.²⁵ If anything, socio-technological developments emphasise the urgency and centrality of this question of purpose. In these times when anyone can access law on-line, and computer programmes can

¹⁹ For example, at this point in time, it would be ridiculous for laws to be made regulating the use of invisible cloaks. However, invisible cloaks may become a reality *and* widespread in the future.

<http://edition.cnn.com/2016/07/20/health/invisibility-cloaks-research/index.html>.

²⁰ Bennett Moses, 'Agents of Change: How the Law "Copes" with Technological Change', above n 18. 787.

²¹ Martha Nussbaum, 'Why lawyers need a broad social education' (2017) *The Future of Australian Legal Education Conference*.

²² Andrew Goldsmith, 'Legal Education and Public Interest' (1998) 9 *Legal Education Review* 143; Mary Keyes and Richard Johnstone, 'Changing Legal Education: Rhetoric, Reality and Prospects for the Future' (2004) 26 *Sydney Law Review* 537; Margaret Thornton, 'The idea of the university and the contemporary legal academy' (2004) 26 *Sydney Law Review* 481.

²³ Keyes and Johnstone, above n 22. 555

²⁴ This is leaving aside long recognition that fewer than half of final law students intend to work in private practice. Christopher Roper, *Career Intentions of Final Year Law Students* (1995) at 79 80. In addition, legal professions are highly stratified, fragmented and diverse, so it no longer makes sense, if it ever did, to talk of *the* skills of *the* lawyer. [19] Crofts.

²⁵ Thornton expresses it thus – 'Rather than rote learning, the focus is on learning for understanding, with regard to the *ought*, not just the *is*, of law.' Thornton, 'The idea of the university and the contemporary legal academy', above n 13. 485

identify relevant knowledge more quickly and accurately than humans, the idea that legal education adds the value of values is essential, otherwise we may as well rely upon robots as legal practitioners.

This idea of legal education inculcating the values of ethics and justice is reflected in the demands of the legal profession.²⁶ The responsibility of the profession to promote justice is encapsulated by the NSW Bar Associations' philosophy of 'servants of all yet of none'²⁷ and the NSW Law Society's Statement of Ethics, commencing with 'We primarily serve the interests of justice'.²⁸ In the United Kingdom, the Carnegie Report asserts that law schools should 'initiate novice practitioners to think, to perform, and to conduct themselves (that, is to act morally and ethically) like professionals'.²⁹ The report recommended that legal education renew its focus on professional ethics,³⁰ noting that the teaching and maintenance of professional ethics and values are central to the assurance of integrity in the administration of justice and quality across the entire legal services sector.³¹ Accordingly, the notion of 'professionalism' clearly encompasses notions of shared norms, high standards of competency and conduct and a sense of public obligation.³²

This article will focus primarily on the value of justice. Although many students may have enrolled in a law degree to pursue justice, it is often a neglected topic.³³ This may in part be because of our awareness that justice is a complex, contentious, pluralistic and heterogeneous concept that is difficult to define.³⁴ Moreover, we may be all too aware of the failings of the legal system to achieve justice. In *Between Facts and Norms*, the German philosopher Jurgen Habermas has provided a means to redeem the ideal of justice whilst still recognising the empirical reality (or failings) of the legal system.

²⁶ For example, the *Legal Services Act 2007 UK* sets out eight regulatory objectives in relation to legal services revolving around value and service.

²⁷ Bar Association of New South Wales, <http://www.nswbar.asn.au/>

²⁸ Law Society of New South Wales, https://www.lawsociety.com.au/ForSolicitors/professionalstandards/Ethics/statement_of_ethics/026278

²⁹ William Sullivan et al, *Educating Lawyers: Preparation for the profession of law*, Jossey-Bass No (2007). 22

³⁰ J. Webb, J. Ching, P. Maharg and A. Sherr, *Setting Standards: The Future of Legal Services Education and Training Regulation in England and Wales* (London, Legal Education and Training Review, 2013) (LETR Report), at p. vii. Available at <http://letr.org.uk/the-report/index.html> (accessed 9 August 2017).

³¹ Webb, J. Ching, P. Maharg and A. Sherr, *Setting Standards: The Future of Legal Services Education and Training Regulation in England and Wales* (London, Legal Education and Training Review, 2013) (LETR Report), at p. vii. Available at <http://letr.org.uk/the-report/index.html> (accessed 9 August 2017). Vii. Four years previously, the Lord Chancellor's Advisory Committee on Legal Education and Conduct (ACLEC) in England and Wales asserted that a law curriculum should emphasise the legal values of "justice, fairness and high ethical standards." Advisory Committee on Legal Education and Conduct (ACLEC), *First Report on Legal Education and Training* (London: ACLEC, 1996) para. 2.4.

³² Paula Baron and Lillian Corbin, 'Thinking like a lawyer/acting like a professional: communities of practice as a means of challenging orthodox legal education' (2012) 46(2) *The Law Teacher* 100, 102.

³³ D'Amato, A. 'Rethinking Legal Education' (1990) 74(1) *Marquette Law Review* 1, Peter Davis, 'Why not a justice school? On the role of justice in legal education and the construction of a pedagogy of justice' (2007) 30(3) *Hamline Law Review* 513.

³⁴ Different, but highly persuasive theories of justice include: Bennett Capers, 'Blind Justice' (2012) 24 *Yale Journal of Law and the Humanities* 179; Drucilla Cornell, Michel Rosenfeld and David Gray Carlson (eds), *Deconstruction and the Possibility of Justice* (Routledge, 1992); Jacques Derrida, 'Force of law: the 'Mystical Foundation of Authority'' (1990) 11 *Cardozo Law Review* 919; Wai Chee Dimock, *Residues of Justice: Literature, Law and Philosophy* (University of California Press, 1996); Costas Douzinas and Ronnie Warrington, *Justice miscarried: ethics and aesthetics in law* (Harvester, 1994); Desmond Manderson, 'Trust Us Justice: 24, Popular Culture, and the Law' in Austin Sarat (ed), *Imagining Legality: Where Law Meets Popular Culture* (2011) 22-47; John Rawls, *A Theory of Justice* (The Belknap Press, 1971).

Habermas asserts that there is a tension between facts and norms, between what the legal system actually achieves and its self-proclaimed ideals. There is often a stark divide between ‘realists’ who focus on the failings of the system, and ‘idealists’ who construct abstract models of justice. To a certain extent, attempts to teach students about justice in legal education are caught between this tension also—between what the legal system actually achieves and its self-proclaimed ideals. Habermas provides a bridge between the normative and empirical concepts of justice. To simplify Habermas’s ideas for the purposes of this article, Habermas contends that even though the legal system does not achieve ideals such as justice and equality empirically, these ideals are accepted by the citizens themselves as engaged participants. This means that claims based on these ideals continue to be valid and powerful, even though the legal system may not (ever) achieve these ideals. Habermas notes that this tension between facts and norms is part of common parlance – we frequently make and accept speech claims that promise more than can possibly be delivered in reality. An example that I frequently use for students is that of love. We may tell someone, ‘I will love you forever’, but both of us know that this is not true. Neither of us will live forever. In addition, there may be a more prosaic aspect based on relationship history. But none of us would like to receive a declaration of love phrased thus: ‘Based on my past relationships I will probably love you for about 5 months/years, then I’ll start to cool down and by the sixth month/year it will be over.’ Just as we would wish to retain the concept of romantic forever love as an ideal, so too do we retain an aspiration and wish for the ideal of justice. Even though the legal system may not achieve justice, we still judge the system by the ideal of justice and continue to aspire to justice. Many judges and politicians are constrained by a concept of justice. Thus, legal education should teach students how to marshal and structure arguments in order to get through to a person’s sense of justice.

Habermas is also valuable because he does not assume a concrete or specific concept of justice. Instead, Habermas draws on his theory of communicative action to construct an idea of individuals (particularly those affected by any decision) attempting to reach reasoned agreement. This consensus is based upon supporting arguments about assumed facts or norms. If these assumed facts or norms should subsequently prove false then there are grounds for questioning the original agreement and reopening the discussion. These communicatively achieved agreements are open to challenge. Accordingly, whilst we may not be able to define the concept of justice for all time,³⁵ we are still able to make claims about the value of justice which bridge the gap between what is achievable and knowable now, and justice as an ideal value. This means that we do not need to, nor should we, impose a particular view of justice on students – its meaning is changing and contingent. But we can present students with a range of different ideas of justice that are relevant and appropriate in different contexts.

3. The interface of legal education and socio-technological change

How then should we educate and prepare students for the interface between law and socio-technological developments *and* embed core values of ethics and the pursuit of justice?³⁶ The UTS Law Faculty has adopted an approach of embedding a story of the engagement of law with socio-technological change in existing core subjects, and created new bespoke elective subjects for students who wish to specialise in law and technology.

Socio-technological change in the core curriculum

³⁵ This is consistent with Derrida’s assertion that if we should be wary of any claims that we have achieved justice once and for all time. Derrida, above n

³⁶ Although it is beyond the scope of this article, access to legal education is an ongoing issue and has implications for equity and justice. Nancy Dowd, Kenneth Nunn and Jane Pendergast, ‘Diversity Matters: Race, gender and ethnicity in legal education’ (2003) 15(1) *University of Florida Journal of Law and Public Policy* 11.

A key approach to engaging with socio-technological change is to highlight that law has been responding to these changes across time and place within the core curriculum. Technology has been with us since time immemorial, since the first human beings used sticks, stones and fire. One of the first stories of technology is the myth of Prometheus, who defies Zeus and stole fire to give to human. Fire was a primal or basic technology from which flowed other technologies³⁷ - 'every art possessed by man comes from Prometheus'.³⁸ As a consequence of this theft, Zeus punished Prometheus by chaining him to a rock. Each day an eagle came to eat his liver, which would grow back only to be devoured again. In addition, Zeus also punished humanity by creating Pandora, who released from her jar 'the price for the blessing' of fire, that is, technology, all the plagues upon humankind.³⁹ This is a founding story of technology and an intention to benefit and improve humanity, but it was accompanied by a curse. It is also a story of law, that of theft, transgression and punishment.

Theft is part of the first year core subject Criminal Law and Procedure and provides an example of long term legal engagement with socio-technological change. Larceny is an early common law offence dating from the 15th century onwards that continues to form the basic theft offence in New South Wales.⁴⁰ The legal theorist George Fletcher has argued persuasively that initially the offence was based upon the underlying pattern of blameworthiness of manifest criminality, that is the idea that you could recognise a thief based on a collective image of acting like a thief.⁴¹ Thieves could be seen thieving, they could be caught in the act. A thief would be recognisable as someone who was in the wrong place at the wrong time. However, Fletcher argues that with the industrial revolution this pattern of blameworthiness no longer served the community. The industrial revolution was a result of massive socio-technological change. People no longer knew everyone in their community. They traded with strangers who they may never see again. These strangers might appear trustworthy, but they could use trickery to take advantage of them. In order to succeed at theft, they needed to not look like a thief, that is, not manifestly criminal. Fletcher argues that in response to this shift in social relations, property offences were transformed from manifest criminality to subjective culpability. The courts no longer focused on whether a person looked or acted like a thief, but upon the accused's culpable intent. Rather than overturn the earlier cases the courts reinterpreted them, asserting that earlier cases had been decided on the basis of felonious intent. As a consequence this area of law is extremely complex. This is an example of legal change in response to socio-technological developments. The changes were accomplished by a reinterpretation of existing categories based upon an underlying paradigm shift. Accordingly, on the face of it the law remained the same, but it was reinterpreted and applied to reflect developing community needs.

A central concept in these offences is that of 'property', which itself has been stretched to meet various socio-technological developments. The law has retained its focus on the actual notes and coins rather than value in its approach to money, leading to various incompatibilities in offence

³⁷ van der Laan, above n 7. 21

³⁸ *Prometheus Bound*, Aeschylus, line 506.

³⁹ *Theogyny* 123. van der Laan, above n 7. 22.

⁴⁰ Section 117 *Crimes Act (NSW)*.

⁴¹ George Fletcher, *Rethinking Criminal Law* (Little Brown, 1978).

components.⁴² More recently, the criminal legal system has responded (or not) to electronic money and bit coin. Whilst the underlying fraud or trickery may remain the same, these new forms of property challenge traditional concepts such as jurisdiction and have the potential to be dramatically broader in scale and effect.

The UTS Law Faculty embeds the interface of law and socio-technological development in the curriculum. This is something that academics already do, but the Faculty now makes this engagement explicit. This means that the interface of law and socio-technological development is historicised and contextualised. It provides a perspective on the variety of different ways in which the legal system has responded to change, and highlights that whilst technological changes might feel urgent at a particular moment, past engagements have been (more or less) effective and have become habitual.⁴³ Students are also given an opportunity to evaluate legal responses to technological change through the prism of justice. For example, in *Kennison v Daire*, the High Court held that a machine cannot give consent.⁴⁴ In that case, the appellant had fraudulently withdrawn money from an ATM from an account that he had previously closed. The appellant knew that he should not have withdrawn the money but took advantage that the ATM was off-line and programmed to give up to \$200 to any person who had a bank card and PIN. The appellant's defence was that the bank, through its programming of the computer, consented to the passing of property in the money. The High Court held that 'the machine could not give the bank's consent in fact and there is no principle in law that requires it to be treated as though it were a person with authority to decide and consent' (at 130). Although the judgment was clear that a computer could not consent, the decision by the High Court was very brief and did not appreciate the complex factual issues that 'surround the intent of persons who program and use automated computer systems – particularly in large scale networks'⁴⁵ – issues that have only become more complex with time. Students can discuss the High Court decision, particularly in light of policy questions that technology could reverse liability in such situations.

In addition, the Faculty also embeds opportunities for students to gain experience and expertise in new technologies. For example, the compulsory subject Civil Practice has worked with the UTS Connected Intelligence Centre to use discourse analytics software to improve students' writing skills.⁴⁶ Students also have the opportunity to undertake extra-curricular activities to work with new technologies with a strong justice element. For example, in the Allens Neota UTS Law Tech Challenge for social justice, students collaborate with staff from Allens Law Firm to create apps using artificial technology. Non-government organisations identify legal issues that can potentially be addressed

⁴² For example, this means that if you 'borrow' money from a friend with the intention of paying the friend back the same value, but not the same notes and coins, the courts will determine that you have an intention to permanently deprive.

⁴³ For examples of analysis of engagements with socio-technological change that are now taken for granted see Kieren Tranter, 'The History of the Haste-Wagons: *The Motor Car Act (1909) (Vic.), emergent technology and the call for law' (2005) 29(3) *Melbourne University Law Review* 843; Gregory N. Mandel, 'History Lessons for a General Theory of Law and Technology' (2007) 8(2) *Minnesota Journal of Law, Science and Technology* 551.

⁴⁴ (1986) 160 CLR 129.

⁴⁵ Alex Steel, 'Vaguely going where no-one has gone: The expansive new computer access offences' (2002) 26 *Criminal Law Journal* 72. 81.

⁴⁶ Simon Knight et al, 'Academic writing analytics for civil law: Participatory design through academic and student engagement' (2017) *International Journal of Artificial Intelligence in Education*.

online. Students build law apps using Neota Logic software to promote access to justice and make tailored legal information more reachable for vulnerable communities.⁴⁷ The #breakinglaw Hackathon invites multidisciplinary teams of students to solve real world challenges with technology.⁴⁸ This means that even in the absence of enrolling in the Legal Futures and Technology major, UTS law students will be able to tell a confident law story about technology infused with the values of ethics and justice.

The new major offers electives that (aside from Capstone Two) are open to all undergraduate students. These include subjects such as Broadcasting and Telecommunication Regulation, Internship, Honours Thesis and Intellectual Property subjects. The new elective Disruptive Technologies (offered in separate iterations at under-graduate and post-graduate levels) provides students with the opportunity to avoid disciplinary silos by considering the implications of new technologies such as bitcoin and blockchain from a variety of legal perspectives. To reflect the innovative nature of the subject, one of the assessments is a lightning talk on either a legal technical issue or debate. This builds up students' capacity to explain or debate something technical without assuming any knowledge in two minutes or less, a worthwhile skill generally and specifically for legal practitioners.

Students enrolled in the major will undertake two capstone subjects. The creation of capstones was informed by increasing national and international recognition of capstones as providing students with culminating experiences that cap-off their university education.⁴⁹ Together the capstones cover the six graduate attributes developed throughout an undergraduate law degree at the Faculty. Capstones offer an opportunity for students to synthesise knowledge and skills, promote holistic thinking, increase confidence and self-efficacy.⁵⁰ McNamara et al. have expressed a specific concern that 'law graduates risk entering legal practice or other professional contexts without adequate understanding of their ethical and professional obligations and without a strong base for future professional learning and development.'⁵¹ This is a concern for values.

Technology Law, Policy and Ethics (Capstone One) is expressly focused upon the analysis of ethical issues and anticipating regulatory interference. It reflects the faculty's commitment to the ongoing development of ethical knowledge and skills throughout the law degree,⁵² in a way that is pervasive

⁴⁷ This program is based on an original program developed at Georgetown University USA and the Neota Logic Inc. <http://www.uts.edu.au/about/faculty-law/news/allens-uts-law-and-neota-logic-%E2%80%99tech-challenge-social-justice%E2%80%99-ngo-partners>.

⁴⁸ <http://www.uts.edu.au/about/faculty-law/news/kwm-and-uts-collaborate-bring-legal-innovation-life>.

⁴⁹ Judith McNamara et al, 'Capstones as Transitional Experiences' (2015) 25 *Legal Education Review* 7. This potential is acknowledged in the Boyer Report, which recommends a culminating experience for all final year students in the United States. Boyer Commission, *Reinventing Undergraduate Education: A Blueprint for America's Research Universities* (Boyer Commission on Educating Undergraduates in the Research University, 1998) 28.

⁵⁰ Ibid.

⁵¹ Ibid.

⁵² Karl Mackie, 'Lawyers' Skills: Educational Skills' in Karl Mackie et al (eds) *Learning Lawyers' Skills* (1989) at 9 and 18; Bobette Wolski, 'Why, How and What to Practice: Integrating Skills Teaching and Learning in the Undergraduate Law Curriculum' (2002) *J of Leg Ed* 287; Sharon Christensen & Sally Kifi, 'Graduate Attributes and Legal Skills: Integration or Disintegration' (2000) 11 *Leg Ed Rev* 207.

and incremental,⁵³ accordingly stressing the importance and ubiquity of ethics.⁵⁴ The entire legal ethics curriculum at UTS Law is aimed at developing students as ethical and reflective practitioners who have a strong sense of personal integrity,⁵⁵ guided by objective considerations such as formal rules that embody norms and principles, and subjective considerations such as moral orientation, personal values and emotion.⁵⁶ The capstone subject encourages students to debate contemporary legal and ethical technological issues at a higher level, such as whether robots have personhood and can be defamed, and the impact of metadata on the concept of privacy.

The Applied Project in Law, Innovation and Technology (Capstone Two) is an example of problem based learning. Organisations (broadly interpreted) will 'pitch' problems for students. In recognition that students may have different affinities the subject will have different types of problems. The first kind of problem will encourage students to suggest technological solutions, similar to the NEOTA Logic Challenge, and to either work with IT students or use their own skills (from the IT/Law combined degree or from extra-curricular activities). For example, we have had interest from Community Law Centres to provide analytics to develop apps for people who are capable of helping themselves so that the legal centres have time and space to help those who cannot help themselves. The other type of 'problem' will be focus on legal issues and challenges raised by socio-technological change. These problems need not require a technological solution, but they might. For example, Koops has analysed the ways in which the government has embraced the enormous increases in technology enabled tracing capacity in ways which have not been offset by the counter-developments of citizen empowerment. This has led to a shift in the power relationship between citizens and the government in ways which have need to be investigated, monitored and addressed.⁵⁷ The recent use of technology to communicate social security debts provides an example of the kind of problem that students could investigate and analyse through the prism of justice.

⁵³ For a summary of the empirical and theoretical justifications see Deborah L. Rhode, "Ethics by the Pervasive Method" (1992) 42 *Journal of Legal Education* 31; see also Deborah L. Rhode, "Into the Valley of Ethics: Professional Responsibility and Educational Reform" (1995) 58 *Law & Contemporary Problems* 139; Deborah L. Rhode, *Professional Responsibility: Ethics by the Pervasive Method* (2nd ed., New York, Aspen Publishers, 1998); Steven Hartwell, "Promoting Moral Development Through Experiential Learning" (1994–1995) 1 *Clinical Law Review* 505; Russell G. Pearce, "Teaching Ethics Seriously: Legal Ethics as the Most Important Subject in Law School" (1998) 29(4) *Loyola University Chicago Law Journal* 719; Carrie Menkel-Meadow and Richard H. Sander, "The Infusion Method at UCLA: Teaching Ethics Pervasively" (1995) 58(3–4) *Law and Contemporary Problems* 129; Douglas N. Frenkel, "On Trying to Teach Judgment" (2001) 12 *Legal Education Review* 19; Gonzalo Villalta Puig, "Legal Ethics in Australian Law Schools" (2008) 42(1) *Law Teacher* 29. 28 Michael Robertson, "Renewing a Focus on Ethics in Legal Education" (2004), pp. 3–4, http://anulaw.anu.edu.au/sites/all/files/users/u4081600/Conference_docs/mikerobertson.pdf (accessed 27 April 2015).

⁵⁴ For the use of new technology to teach ethics. Travis, above n This article details Travis' innovative method of teaching professional ethics through popular culture. Travis encourages students to understand changes to professional ethics over the past 100 years and shift to commercialisation as a possible reason for the negative portrayal of lawyers. The subject then encourages students to interrogate and re-imagine professional ethics for the future. B. Green, "Less is More: Teaching Legal Ethics in Context" (1996–1997) 39 *William & Mary Law Review* 357. S. Colbran and A. Gilding, "Exploring Legal Ethics Using Student Generated Storyboards" (2014) 48(3) *Law Teacher* 296–320 at p. 296

⁵⁵ Maxine Evers and Lesley Townsley, 'The importance of ethics in the law curriculum: essential or incidental?' (2017) 51(1) *The Law Teacher* 17. 20

⁵⁶ *Ibid.* 20

⁵⁷ Bert-Jaap Koops, 'Law, Technology, and Shifting Power Relations' (2010) 25 *Berkeley Technology Law Journal* 973, 980.

The projects will encourage students to consider issues of justice from empirical and theoretical perspectives, in different areas of law, and the ways that technology can enhance or detract from justice (such as distributive justice or access to justice). The projects thus have the potential to encourage students to reflect upon their own concepts of justice. Additionally, they demonstrate that justice continues to be a valid norm by which the public, legal practitioners and politicians evaluate the legal system. Students are thus encouraged to marshal their legal and extra-disciplinary skills to frame analyses and arguments about the legal system and technology in terms of justice.⁵⁸ The projects will be collaborative, requiring co-operation, dividing up tasks, and developing interpersonal skills vital for any profession. Collaborative projects are beneficial for students⁵⁹ and at the heart of legal practice.⁶⁰ The projects will emphasise context, law in interaction with other laws, disciplines and society in general,⁶¹ and avoid compartmentalisation of law and provide students with the opportunity to draw upon legal and non-legal skills.⁶² In addition, the projects offer the 'lure of relevance', students will apply knowledge to realistic scenarios and develop problem solving skills good for all disciplines but especially law.⁶³ Part of the assessment will involve a presentation of the solution to the rest of the class. The best projects will present to the organisation. The subject will be accompanied by a series of lectures and podcasts on theoretical aspects including different models of justice and skill-based seminars including project management and how to work collaboratively.⁶⁴ Experts will provide lectures on perceived challenges. The capstone projects offer students the opportunity to demonstrate their best work in their final year – 'the result of focused, intense, meaningful and integrative intellectual activity.'⁶⁵

Conclusion

Law has a long history of engagement with other disciplines and institutions – ranging from medicine, engineering, and the arts.⁶⁶ The engagement of law with technology is arguably one more example of another such discipline. One apparent difference is the perceived urgency in the need for, and failure of, law to keep up with technological developments and our increasingly dependence

⁵⁸ Penny Crofts, 'Crossing the Theory/Practice divide: Community-based problem solving' (2001) 3 *UTS Law Review* 40.

⁵⁹ David W Johnson & Roger T Johnson, *Cooperation and Competition: Theory and Research* (1989) at 74, 170; Elizabeth A Reilly, 'Deposing the "Tyranny of Extroverts": Collaborative Learning in the Traditional Classroom Format' (2000) 50 *J of Leg Ed* 593 at 598 601.

⁶⁰ S. Nathanson, *What Lawyers Do: A Problem Solving Approach to Legal Practice 4* (London, Sweet & Maxwell, 1997) at pp. 2–12.

⁶¹ Crofts, above n

⁶² Pearce, Campbell and Harding, *Australian Law Schools: A Discipline Assessment for the Commonwealth Tertiary Education Commission, A Summary and Volumes I–IV*, AGPS, Canberra, 1987, p.29.

⁶³ Paul Ramsden, D. Margetson, E. Martin and S. Clarke, *Recognising and Rewarding Good Teaching in Australian Higher Education* (Canberra, Committee for the Advancement of University Teaching, Australian Government Publishing Service, 1995) at p. 24.

⁶⁴ Susan Bryant, 'Collaboration in Law Practice: A Satisfying and Productive Process for a Diverse Profession' (1993) 17 *Vermont LR* 459 at 485

⁶⁵ Ann Ferren and David Paris, 'How students, faculty and institutions can fulfil the promises of capstones' (2014) 15(4) *Peer Review* 4.

⁶⁶ Goodrich has analysed how law engages with other disciplines such as medicine through the concept of interdiscourse. Peter Goodrich, *Legal Discourse: Studies in Linguistics, Rhetoric and Legal Analysis* (St Martin's Press, 1987).

upon technology as individuals, professionals and societies.⁶⁷ Technological developments are focused upon overcoming physical and human constraints. There are no normative constraints inherent in the quest for ongoing and future technological development. In contrast, law proffers an essential normative constraint. Just because we *can* do something, does not mean that we *should*. It is vital that as legal educators we provide students with classic skills and values such as ethics and justice to ensure that future and ongoing legal engagements with socio-technological developments are tempered by legal normative constraints.

⁶⁷ This dependence and lack of control is highlighted when there is an internet or computer failure, which means almost no work can be done.